

CLAIMS

What is claimed is:

1. In a test apparatus (100) used for measuring the input and output characteristics of an amplifier, a method (200) for determining test program parameters, comprising: calculating input loss (220) from the test apparatus power source (125) to the input of the amplifier, defining an input loss correction factor; calculating output loss (220) from the amplifier output to the power meter (135) of the test apparatus, defining an output loss correction factor; using the input loss correction factor to determine (220) a real input power level (105); and using the output loss correction factor to determine (220) a real output level (115).
2. The method of claim 1 further comprising, calibrating RF tests as a function of the input loss correction factor and the output loss correction factor, wherein the RF tests include at least one of the following: input power, output power, gain, efficiency, and detector error, linearity, noise figure.
3. A method (500) for inserting calibrating factors into an ATE program, the method comprising: a) obtaining parameters (505) from at least one golden sample, wherein the parameters include lab gain, lab input power, and lab output power; b) programming parameters (510) from the golden sample into ATE test program; c) obtaining measurements (515) on ATE for the golden sample, categorize the measurements into a lookup table; d) calculating an uncorrected gain (520) at small input signal for at least one small input signal value; e) determining a first sum of a first input loss and a first output loss (525), from the first sum determine a first gain change; f) defining a first initial output loss (530); g) calculating an initial input loss (540) from the difference of the first gain change and the first initial output loss; h) setting power level of the ATE (545) to sum of input power lab and initial input loss; i) measuring output power on ATE (550) wherein output power corresponds to an input power; and j) calculating a corrected output power (555), wherein the corrected output power is the sum of output power on the ATE and initial output loss.
4. The method of claim 3 wherein, the method further comprising; k). determining a degree of correlation (560) between the corrected output power and lab output power, wherein the degree of correlation determines inserting corrected values into the ATE test program (565) for input power and output power or defining another initial output loss (535) and performing steps g) through j) again.

5. System for calibrating test program parameters for measuring the input and out characteristics of an amplifier, comprising: means for calculating input loss from the test apparatus power source to the input of the amplifier, defining an input loss correction factor; means calculating output loss from the amplifier output to the power meter of the test apparatus, defining an output loss correction factor; means for using the input loss correction factor to determine a real input power level; and means for using the output loss correction factor to determine a real output level.

6. The system of claim 5 further comprising, means for calibrating RF tests using the input loss correction factor and the output loss correction factor, wherein the RF tests include at least one of the following: output power, gain, efficiency, detector error, linearity, and noise figure.

7. Used in the measuring of input and output characteristics of an amplifier, machine readable medium, comprising: a plurality of computer instructions, wherein the computer instructions include, calculating input loss (220) from the test apparatus power source (125) to the input of the amplifier, defining an input loss correction factor; calculating output loss (220) from the amplifier output to the power meter (135) of the test apparatus, defining an output loss correction factor; using the input loss correction factor to determine (220) a real input power level (105); and using the output loss correction factor to determine (220) a real output level (115); calibrating RF tests as a function of the input loss correction factor and the output loss correction factor, wherein the RF tests include at least one of the following: output power, gain, efficiency, and detector error, linearity, noise figure; and indicating to the user the calibrating of RF tests is complete.

8. Used in the measuring of input and output characteristics of an amplifier, machine readable medium, comprising: a plurality of computer instructions, wherein the computer instructions include steps (500) for inserting calibrating factors into an ATE program, the steps comprising: a) obtaining parameters (505) from at least one golden sample, wherein the parameters include lab gain, lab input power, and lab output power; b) programming parameters (510) from the golden sample into ATE test program; c) obtaining measurements (515) on ATE for the golden sample, categorize the measurements into a lookup table; d) calculating an uncorrected gain (520) at small input signal for at least one small input signal value; e) determining a first sum of a first input loss and a first output loss (525), from the first sum determine a first gain change; f) defining a first initial output loss (530); g) calculating an initial input loss (540) from the difference of

the first gain change and the first initial output loss; h) setting power level of the ATE (545) to sum of input power lab and initial input loss; i) measuring output power on ATE (550) wherein output power corresponds to an input power; and j) calculating a corrected output power (555), wherein the corrected output power is the sum of output power on the ATE and initial output loss; and k) determining a degree of correlation (560) between the corrected output power with lab output power, wherein the degree of correlation determines inserting corrected values into the ATE test program (565) for input power and output power or defining another initial output loss (535) and performing steps g) through j) again.